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Period\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Evolution Exam (100 points)**

**The following questions are Multiple Choice and are worth (5 points each).**

1. Darwin’s book “The Origin of Species” Darwin proposes the theory of:

a) Survival of the fittest

b) Natural Selection

c) Evolution

d) Creationism

e) All of the above

2. Descent with Modification is best described as:

a) The stronger faster animals survive and pass their genes.

b) Small changes such as eye color inherited by your parents.

c) Changes such as getting bigger as you get older that make you more fit to survive.

d) Small changes over a long period of time make for big changes that creates new species

e) None of the above

3. Adaptive radiation is:

a) The rapid expansion and diversification of an evolving group of organisms

b) Big changes to an organism that has been in contact to radioactive materials

c) When 2 unrelated species gradually become more and more similar.

d) Only relevant to species that lived before humans.

e) both A and D

4. Which of the following is used as **evidence** for evolution:

a) Embryology

b) Fossils

c) DNA

d) b and c only

e) a, b, and c

5. The evolutionary relation between a Bee and a flowering plant is an example of:

a) Mutation

b) A niche

c) Divergent evolution

d) Coeveolution

e) There Is no relation bees just happen to like flowers.

**Circle the answer that best fits the following scenarios (5 points each)**

6. The male Cuddle fish (*Sepia latimanus)* uses different strategies to find mates. Some may fight for their mates, others will act as females to get past bigger males to steal the female. “The sneakiness is an example of the organisms **fitness**” (true / false)

7. During the ice age and early age of man, humans had to use animals furs to keep warm this is an example of what \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (acclimation/adaptation).

8. The aids virus when introduced to certain drugs always is able to survive because of mutations that occur randomly that leave much of it still active. This is an example of (acclimation/adaptation).

**Fill in the blank**

9 - 11 Darwin sailed to the islands of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ where he found small changes in finches called \_\_\_\_\_\_\_\_\_\_\_\_\_\_(s) which made them specialized in retrieving certain foods. The ship Darwin sailed on was the H.M.S \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

12. The best way to determine how closely related two species are would be by observing the 2 different organisms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Short answer questions

Describe in 3-5 sentences Natural Selection (10 points)

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Think of a new example **OR** explain the meaning for each (5 points each)

An adaption \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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An Acclimation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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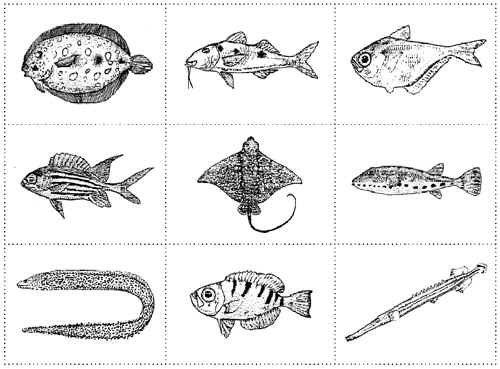
CoEvolution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Divergent Evolution\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Using your knowledge on Dichotomous keys find the name of the species of coral reef fish. (5 points each)



Fish A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fish D \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Extra Credit: (5 Points)

For what period of earth did animals first cross from water to land:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |
| --- |
| **Step 1**  If fish shape is long and skinny then go to step 2  If fish shape is not long and skinny, then go to step 3 |
| **Step 2**  If fish has pointed fins, it is a trumpet fish  If fish has smooth fins, it is a spotted moray eel |
| **Step 3**  If fish has both eyes on top of the head, then go to step 4  If fish has one eye on each side of the head, then go to step 5 |
| **Step 4**  If fish has long whip-like tail, it is a spotted eagle ray  If fish has short, blunt tail, it is a peacock flounder |
| **Step 5**  **If fish has spots, then go to step 6**  **If fish does not have spots, then go to step 7** |
| **Step 6**  **If fish has chin "whiskers," it is a spotted goat fish**  **If fish does not have chin "whiskers," it is a band-tail puffer** |
| **Step 7**  **If fish has stripes, then go to step 8**  **If fish does not have stripes, it is a glassy sweeper** |
| **Step 8**  **If fish has a v-shaped tail, it is a squirrel fish**  **If fish has a blunt tail, it is a glass-eye snapper** |